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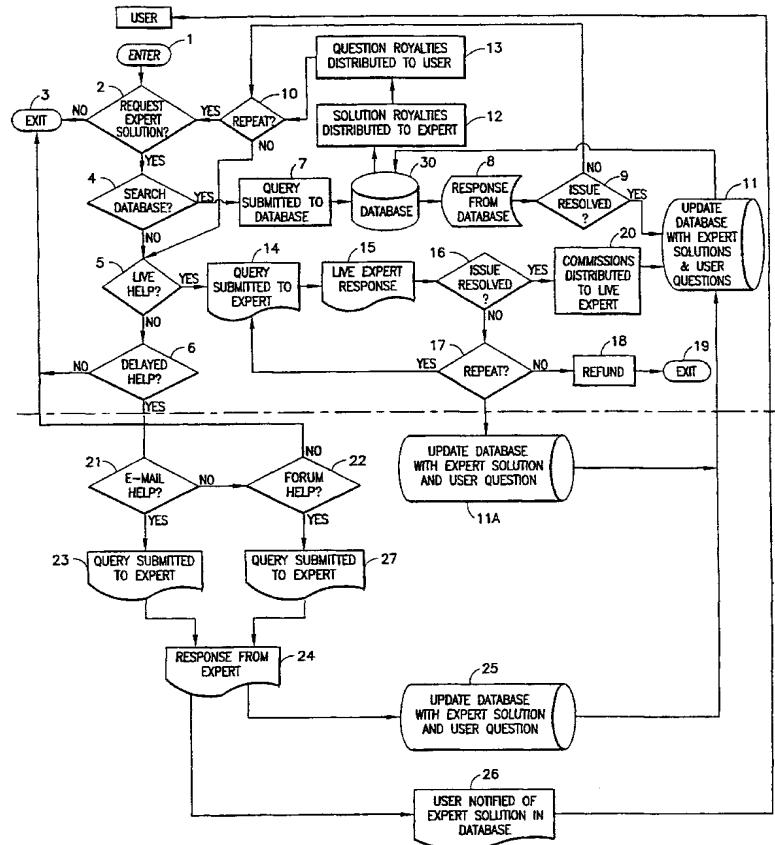
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(54) Title: KNOWLEDGE DATABASE SYSTEM AND METHOD



**(57) Abstract:** A system and method for providing communications between an expert and an end user seeking a solution to an end user request. A database for storing therein information relating to a plurality of experts is provided. An end user request is received from an end user (2). The database is searched to identify experts who have qualifications which correspond to the end user request (4). At least a portion of the end user request is transmitted to at least one expert (14). An expert answer, based on the end user request is transmitted to an end user (15). The request and the answer are stored in a database (11A). The end user is compensated when a subsequent end user requests and receives the solution to the request (20).

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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

## KNOWLEDGE DATABASE SYSTEM AND METHOD

## BACKGROUND OF THE INVENTION

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## 1. Field of the Invention

This invention relates to an improved method and apparatus for seeking, providing, and compensating individuals who request expert solutions, and those individuals who provide it. More particularly, it relates to a system and to a process in which an individual seeking a solution to an expert request can gain access to various levels of information through communication mediums, including but not limited to digital and analog networks, in which a knowledge exchange and transfer occurs.

## 2. Background of the Invention

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The pervasiveness of technology and information has marginalized seemingly everything except original thought and human intuition. Scarcity, and, thus, value now resides in knowledge and expertise that makes information usable. While the growth of the Internet has drawn users at an unprecedented pace, the volume of information and lack of personalized services have made it increasingly difficult for individuals to find help when they need it, and for experts to easily and successfully provide the necessary solutions. People crave quick and easy access to expert guidance and help when life's situations seem too complex, things go wrong, and there's nowhere else to turn.

So far, individuals seeking expert solutions have been faced with the difficulty of not knowing how and where to seek out such expertise. What is needed is an easy way to 5 receive qualified expert solutions at precisely the moment assistance is requested. Given the magnitude of this problem, experts are recognizing the need to provide a means by which current and potential knowledge seekers can more easily find immediate and relevant information.

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While some forums and means of knowledge transfer exist, they are very often too difficult to locate, access, and use. They also provide little, if any, incentives, monetary or otherwise, for the continual exchange of 15 knowledge, inquiries, and information.

A prior art solution which attempts to deal with some of the problems of matching experts and end users, managing communications between them, and assuring that the 20 experts are paid for their services is United States Patent No. 5,862,223 (incorporated herein by reference). However, other than the hope of obtaining useful answers to a user's inquiry, there is no separate long term incentive for a user to use the system. Further, other 25 than obtaining immediate payment for the work done in providing an answer or solution to the user's inquiry, there is no long term incentive for the expert to participate and give up his or her very valuable time to provide answers or solutions.

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## OBJECTS OF THE INVENTION

In view of the foregoing there is a need for an improved method and apparatus for seeking, providing, and 5 compensating those individuals who need expert solutions, and those individuals who provide such solutions. This invention relates to such a method and such a system.

An object of this invention is to provide this process 10 and an apparatus for implementing this process through various communications mediums, including, but not limited to digital and analog networks. Furthermore, this knowledge exchange and transfer may occur via live, real time, interfaces, as well as delayed and offline delivery 15 mechanisms.

## SUMMARY OF THE INVENTION

In accordance with the present invention, an improved 20 method of seeking, providing, and compensating those individuals with expert requests, and those qualified experts who supply solutions is provided and detailed below. This process is equally suited to both the expert and the individual seeking the expertise by providing, in 25 addition to the knowledge exchange, a pre-set value-based compensation and ongoing royalty mechanism to all parties involved.

Users are presented with a secure and easy-to-use 30 interface to ask questions, directly and indirectly, to an expert who offers instant, delayed, and personalized answers and solutions that the user needs to get back into the action of work, business, recreation, or study.

Experts are presented with an opportunity to earn predetermined rates of compensation in exchange for providing solutions to individuals seeking expertise via various communication mediums, including, but not limited to digital and analog networks. The financial rewards generated by these solutions can continue to accumulate well after the conclusion of the original expert solution request. Based on the usefulness of the solution, experts can submit their solutions to a database and earn perpetual royalties based upon the number of times each answer is read, viewed, or accessed from this database and communicated by or to another user.

This ongoing royalty mechanism is also extended to individuals who are seeking expert solutions. These users are rewarded for asking questions and making solution requests that are added to the database and subsequently are helpful to others. Therefore, this process creates a system of incentives for the continual exchange and transfer of knowledge, inquiries, and information.

In accordance with the invention, a method and system is provided. The system provides expert solutions to end users seeking a solution to an end user request. The system may comprise receiving means for receiving an end user request generated by an end user, the receiving means having associated therewith a database for storing therein information relating to a plurality of experts, means for searching the database to select at least one expert and to generate a search result which corresponds to the end user request; means for transmitting at least a portion of the end user request to the expert; means

- for receiving an expert answer corresponding to the end user request transmitted; means for transmitting at least a portion of the expert answer to the end user; means for storing the request and the solution in the database; and
- 5 means for compensating the end user when a subsequent end user requests and receives the solution. The system may further comprise means for compensating the expert for providing the solution.
- 10 The system may further comprise means for an expert to submit a request previously received and a solution previously provided by said expert (even if not done in accordance with the invention); and means for entering the previously received request and the previously
- 15 provided solution into the database. The system may further comprise means for compensating the expert who submitted the previously received request and the previously provided solution when a subsequent end user requests that solution. The expert may be compensated on
- 20 a one-time basis, or each time a subsequent user of the system access the solution.

The system may be implemented on the Internet. Thus, the database is made available to users by a web server.

25 It may include means for sending and receiving e-mail, which can be used to communicate with end users, experts, or both. The database may be a relational database.

## BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing aspects and other features of the present  
5 invention are explained in the following description,  
taken in connection with the accompanying drawings,  
wherein:

FIG. 1 is a flow diagram illustrating the steps involved  
in the method of the invention; and

10 FIG. 2 is a block diagram of a system used to implement  
the method of Fig 1.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

15 Referring to FIG. 1, a flow diagram illustrating the  
method of the invention is shown. Initially, as  
represented by step 1, an individual enters the system.  
This system can include, but not be limited to, public  
20 networks such as the Internet and other digital and  
analog networks. This system can also include, but not be  
limited to, private networks, such as internal data,  
voice, video, radio, satellite, and cable networks.

25 As represented by step 2, the user is asked if he wants  
to request an expert solution. If the user answers No,  
then he may proceed to step 3 and exit the system. If he  
answers Yes, then he may proceed to step 4 in order to  
find an expert solution.

30 As represented by step 4, the individual is asked if he  
would like to use the query and search mechanisms of the

system database 30 in order to search for an existing expert solution. This request is made by the individual in order to view, read, or otherwise become aware of an answer and/or expert solution to a question and/or 5 problem. As an example, a computer user may submit a question regarding a recurring error code that is preventing the user from printing a file.

Database 30 may be implemented by any one of a number of 10 commercially available object oriented relational databases such as, for example, Oracle 8i.

As represented by step 5, if the user has answered No in step 4, the user is then asked if he would like to 15 request a solution from a Live Expert.

As represented by step 6, if the user has answered No in step 5, the user is then asked if he would like to request a solution from an Expert who will produce a 20 solution over a period of time.

As represented by step 7, if the user has answered Yes to the question stated above in step 4, the user then submits his request for an expert solution by submitting 25 a query to database 30.

As represented by step 8, a response from the database 30 to the initial query or expert solution request is produced and displayed, announced, or otherwise made 30 known to the individual making the request.

As represented by step 9, the user is asked if the database response has resolved the issue that prompted the user to request an expert solution.

5 As represented by step 10, if the user has answered "No" to the question posed in Step 9, the user is asked if he would like to repeat the process of searching the database 30 for an expert solution, typically by modifying the query.

10

If, as represented by step 11, the user has answered "Yes" to the question posed in Step 9, the database 30 is now updated with any additional information that might have been posed or provided to the user. This information 15 can include, but is not limited to, comments, ratings, categorization, and suggestions. The Expert solution as well as the User's question, are both added to the database 30.

20 As represented by step 12, royalties are distributed to the Expert that provided, created, or authored the solution that was found in the database 30. The financial rewards generated by this solution can continue to accumulate well after the conclusion of the original 25 expert solution request. Based on the usefulness of the solution, experts can submit their solutions to a database and earn royalties based upon the number of times each answer is read, viewed, or accessed from this database and communicated by or to another user.

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As represented by step 13, royalties may be distributed to the User who first sought this particular Expert Solution from the Database, and therefore, provided a

link or match between the question and solution for future Users to utilize in their search queries. Thus, Users are rewarded for asking questions that result in new solution requests and answers to these requests or 5 solutions being added to the database, which subsequently become helpful to other Users. Therefore, this process creates a system of incentives for the continual exchange and transfer of knowledge, inquiries, and information.

10 As represented by step 14, if the User has answered "Yes" to the question of whether or not to seek Live Expert Help as posed in Step 5, the user's Expert solution request is submitted to the Live Expert in the form of a query.

15 As represented by step 15, the Live Expert has found, created, or modified a solution as a response to the User's query. This response can be delivered to the User using technology that includes, but is not limited to, 20 real time digital or analog communications interfaces and devices.

As represented by step 16, the User is asked whether or not the Live Expert's response has resolved the issue 25 that prompted the user to request a Live Expert solution.

As represented by step 17, if the user has answered "No" to the question posed in Step 16, he is asked if he would like to repeat the process of submitting a query to 30 a different Live Expert.

As represented by step 18, if the user has chosen to answer "No" to the question posed above in Step 17, the

user is entitled to a refund for any charges or fees incurred for Live Expert's services. However, even if the user is not satisfied with the answer, database 30 may still be updated, as represented by 11A, to 5 facilitate tracking of which experts are successful in providing satisfactory solutions to user inquiries.

As represented by step 19, the user may now exit the system.

10

As represented by step 20, if the User has answered "yes" to the question posed in Step 16, then the Live Expert has indeed delivered a solution that has resolved the User's issue, and is rewarded by earning a commission for 15 rendering such satisfactory services.

As represented by step 11, following Step 20, the database 30 is now updated with any additional information that might have been provided to or posed to 20 the user. This information can include, but is not limited to, comments, ratings, categorization, and suggestions. The Expert solution as well as the User's question, are both added to the database 30.

25 As represented by step 21, if the user has answered "Yes" to the question posed in Step 6, he is asked if he would like to request an Expert Solution via Electronic mail.

As represented by step 22, if the user has answered "No" 30 to the question posed in Step 21, he is asked whether or not he would like to request an Expert Solution via electronic forums that include, but are not limited to, bulletin boards.

As represented by step 23, if the user has answered "Yes" to the question stated above in step 22, the user then submits his request for an expert solution by submitting 5 a query to one or more Experts via Electronic mail.

As represented by step 24, the Expert(s) has found, created, or modified a solution as a response to the User's query.

10

As represented by step 25, the response indicated in Step 24 is updated to a database either through manual or automatic systems or processes.

15 As represented by step 26, as a result of Steps 24 and 25, the User is notified using (but not limited to) electronic mail, instant relay chat, instant messaging, and analog and/or digital telephony systems, of an Expert Response and/or solution that has been updated to a 20 Database and can be viewed, read, or otherwise accessed by the User.

25 As represented by step 27, if the user has answered "Yes" to the question posed in Step 22, the user submits a query to the Expert.

In the system illustrated in Fig. 2, the User has access via a public or private network, such as the Internet 50 and a router 52 by using a input terminal which may be a 30 personal computer 40.

The User's Expert Solution Request is submitted via an interface, which may be, for example, an entry screen 41,

which is published or made available via, for example, a Web Server 42, whereby preliminary information is directly and/or indirectly inputted from the User regarding the problem or question that is in need of an  
5 Expert Solution.

A middleware server 43 can further collect, process, sort, or calculate any or all information that is submitted by use of entry screen 41.

10

The data that is output from middleware server 43 can be input into one of several possible database application servers 44 in the efforts of assigning, selecting, flagging, or otherwise locating data, tables, object,  
15 records, or files (45, 46, 47, 48, 49) in database 30 that may match the initial Expert Solution Request inputted by the User via entry screen 41. The resulting data output is then returned to the User by the reverse sequence of use of the elements represented in Fig. 2 and  
20 discussed above.

CLAIMS

What is claimed is:

1. A system for providing expert solutions to an end user seeking a solution to an end user request, comprising:

receiving means for receiving an end user request generated by an end user, the receiving means having associated therewith a database for storing therein information relating to a plurality of experts,

means for searching the database to select at least one expert and to generate a search result which corresponds to the end user request;

means for transmitting at least a portion of the end user request to the expert;

means for receiving an expert answer corresponding to the end user request transmitted;

means for transmitting at least a portion of the expert answer to the end user;

means for storing the request and the solution in the database; and

means for compensating the end user when a subsequent end user requests and receives the solution.

2. The system of Claim 1 further comprising:

means for an expert to submit a request previously received by that expert and a solution previously provided by said expert; and

means for entering the previously received request and the previously provided solution into the database.

3. The system of Claim 2 further comprising means for compensating the expert who submitted the previously received request and the previously provided solution when a subsequent end user requests that solution.

4. The system of Claim 1, further comprising means for compensating the expert for providing the solution.

5. The system of Claim 4 wherein the expert is compensated on a one time basis.

6. The system of Claim 4 wherein the expert is compensated each time a subsequent user of the system accesses the solution.

7. The system of Claim 1 implemented on the Internet, wherein the database is made available to users by a web server.

8. The system of Claim 1 further comprising means for sending and receiving e-mail.

9. The system of Claim 8 wherein the means for sending and receiving e-mail is used to communicate with end users, experts, or both.

10. The system of Claim 1 wherein the database is a relational database.

11. A method of providing communications between an expert and an end user seeking a solution to an end user request, comprising the steps of:

providing a database for storing therein information relating to a plurality of experts;

receiving an end user request from an end user;

searching the database to identifying experts who have qualifications which correspond to the end user request;

transmitting at least a portion of the end user request to at least one identified expert;

transmitting an expert solution, based on the end user request, to the end user;

storing the request and solution in a database; and

compensating the end user when a subsequent end user requests and receives the solution to the request.

12. The method of Claim 11 further comprising:

an expert submitting a request previously received by the expert and a solution previously provided by said expert; and

entering the previously received request and the previously provided solution into the database.

13. The method of Claim 12 further comprising compensating the expert who submitted the previously received request and the previously provided solution when a subsequent end user requests that solution.

14. The method of Claim 11, further comprising compensating the expert for providing the solution.

15. The method of Claim 14 wherein the expert is compensated on a one time basis.

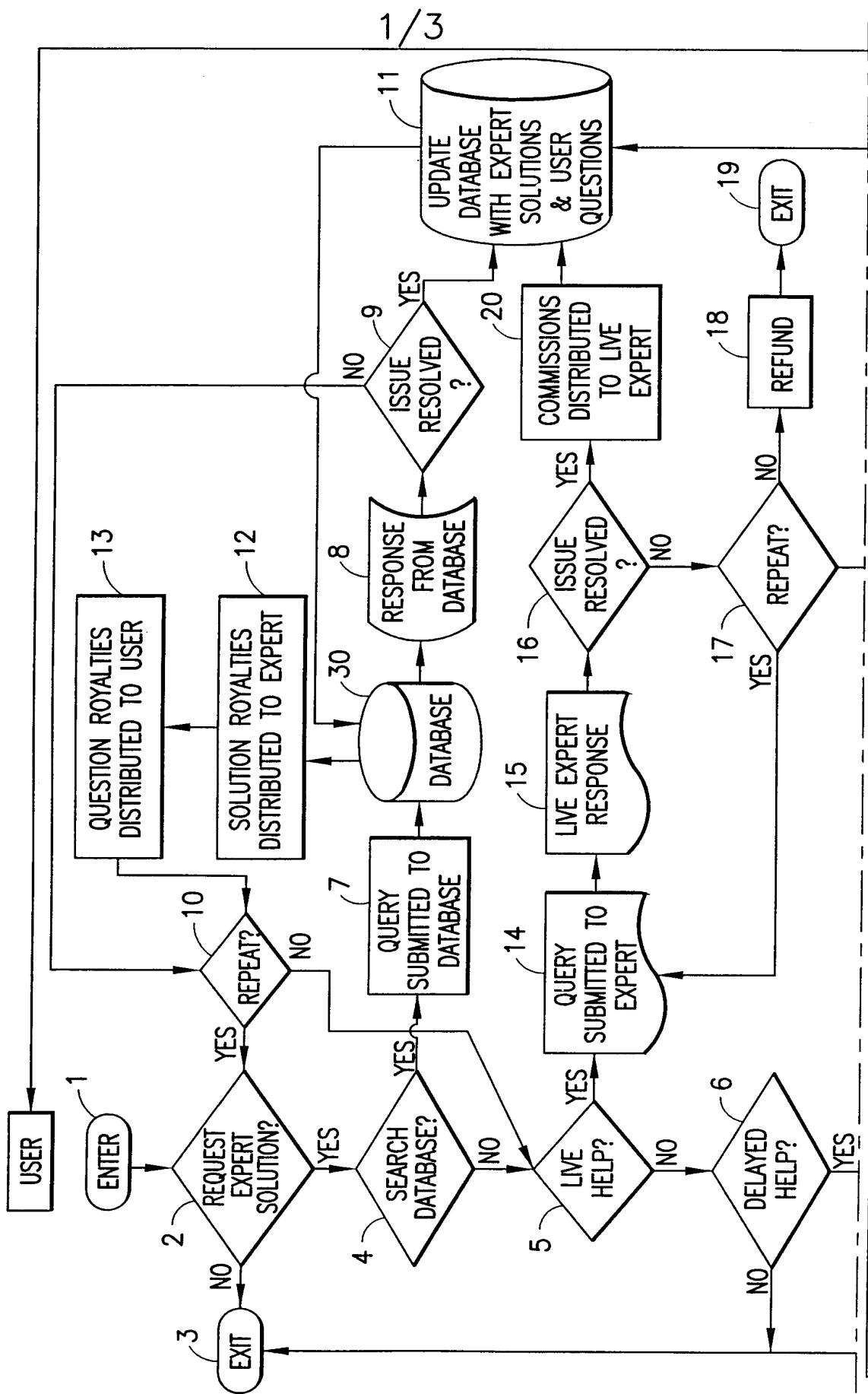
16. The method of Claim 14 wherein the expert is compensated each time a subsequent user of the system accesses the solution.

17. The method of Claim 11 implemented on the Internet, wherein the database is made available to users by a web server.

18. The method of Claim 11 further comprising sending and receiving e-mail.

19. The method of Claim 18 wherein sending and receiving e-mail is used to communicate with end users, experts, or both.

20. The method of Claim 11 wherein the database is a relational database.



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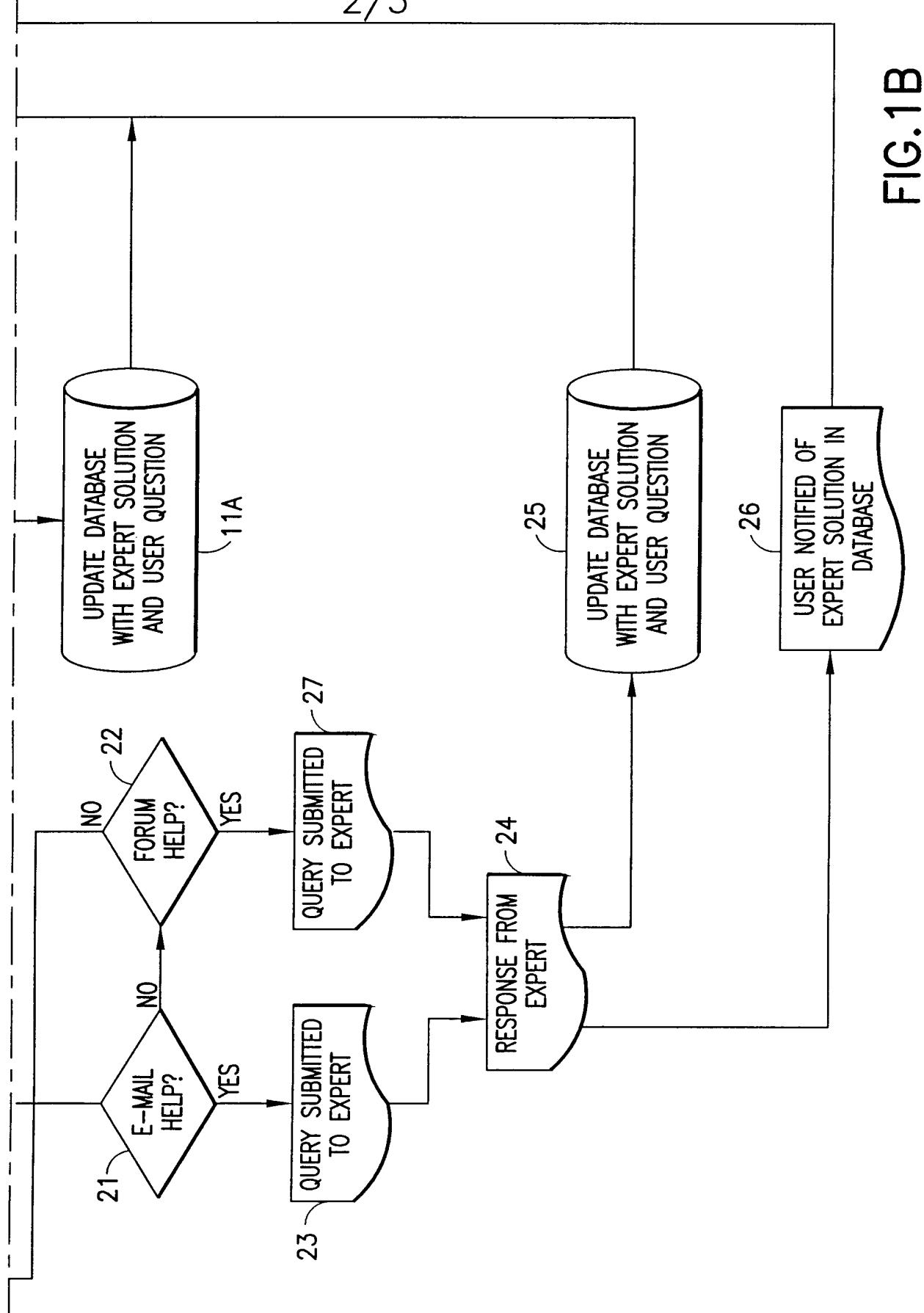
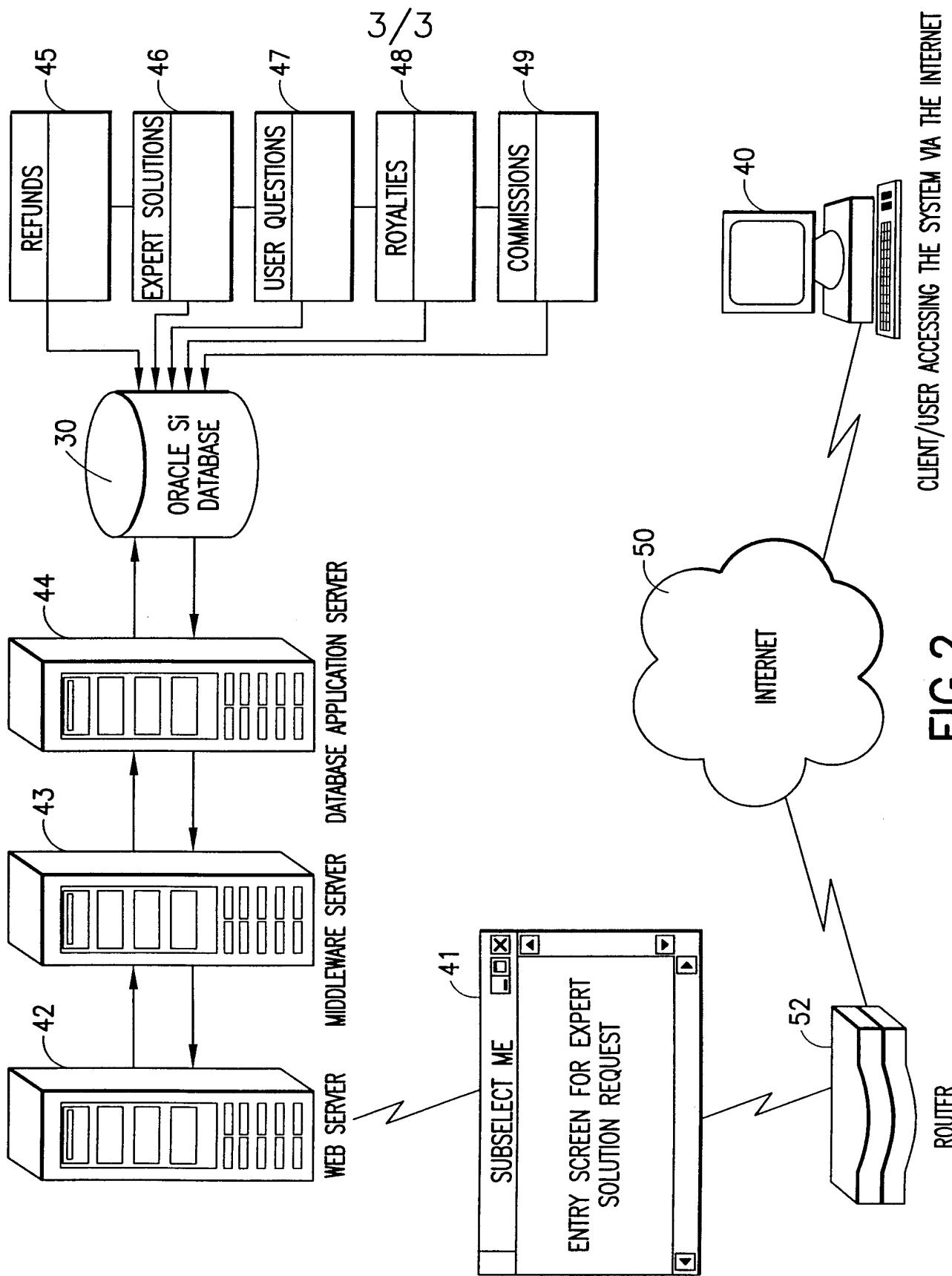


FIG. 1B

**FIG.2**

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/25015

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 17/60

US CL : 705/8

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 705/1, 3, 7, 8, 26

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EAST, WEST, DIALOG, INTERNET

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,862,223 A (WALKER et al) 19 January 1999, col. 6, line 56 through col. 11, line 56.	1-20
X	Information retrieved about AllExperts from <a href="http://www.allexperts.com">http://www.allexperts.com</a> . Established 1 July 1998, all pages.	1-20
X,P	Information about Infomarkets.com retrieved from <a href="http://www.infomarkets.com">http://www.infomarkets.com</a> . Published 19 October 1999, all pages.	1-20
X	Information about HotDispatch retrieved from <a href="http://corporate.hotdispatch.com">http://corporate.hotdispatch.com</a> . Established in January 1999, all pages.	1-20

Further documents are listed in the continuation of Box C.  See patent family annex.

* Special categories of cited documents.	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means		
"P" document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search	Date of mailing of the international search report
17 NOVEMBER 2000	29 DEC 2000
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer TARIQ HAFIZ <i>James R. Matthews</i> Telephone No. (703) 305-9643

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## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	Information about Keen.com retrieved from <a href="http://www.keen.com">http://www.keen.com</a> . Established in September 1999, all pages.	1-20
X	Expertcity.com Launches Premier Online Marketplace for Expert Services. PR Newswire. 30 August 1999, all pages.	1-20
X	Rent-An-Expert on the Web. Information Week. 06 September 1999, page 75.	1-20
X	Information about Expertcity.com retrieved from <a href="http://www.expertcity.com">http://www.expertcity.com</a> . Established 30 August 1999, all pages.	1-20